Mc Graw Hill

Virginia Inspire Science



SPARK CURIOSITY

6–8 Program Overview



Tap Into and Extend Student Curiosity

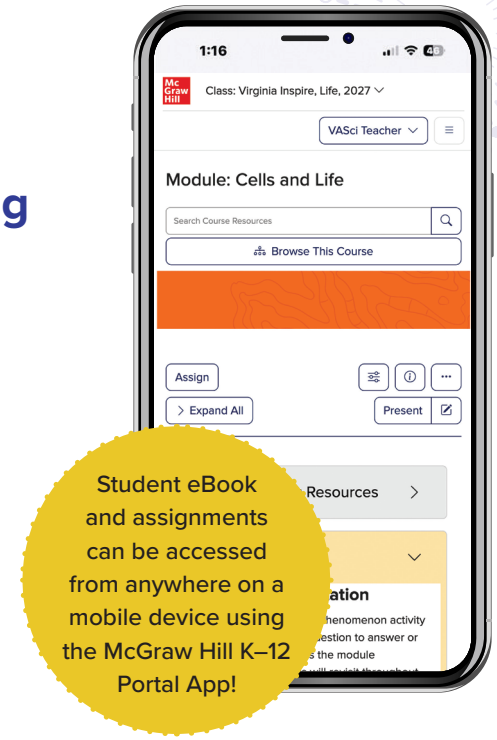
Middle school students have a wealth of new experiences competing for their attention, which can lead to challenges with learning engagement. Fully aligned to Virginia's Science Standards of Learning (SOLs), *Virginia Inspire Science* ©2027 sparks curiosity and empowers students to explore, question, and discover. When fueled by curiosity, students look to the world around them through the investigation of real-world phenomena in interesting, innovative, and hands-on ways. A new generation of innovators is ready to take on today's challenges to become tomorrow's scientists.

Bring Science to Life in Your Classroom

Engaging, Flexible, Cross-Curricular Learning

Virginia Inspire Science is designed to support phenomena-based, three-dimensional learning, empowering students to explore, ask questions, and think critically. With foundational science knowledge and essential problem-solving skills, students are prepared to thrive in an ever-evolving world. The three dimensions of science learning are intentionally connected throughout the curriculum, helping teachers engage students in Scientific and Engineering Practices (SEP), Disciplinary Core Ideas (DCI), and Crosscutting Concepts (CCC).

Built for flexibility, *Virginia Inspire Science* combines write-in student worktexts, adaptable teacher resources, hands-on labs, engaging multimedia, differentiation support, and on-demand professional learning to help educators spark curiosity and drive scientific discovery.



Student eBook and assignments can be accessed from anywhere on a mobile device using the McGraw Hill K–12 Portal App!



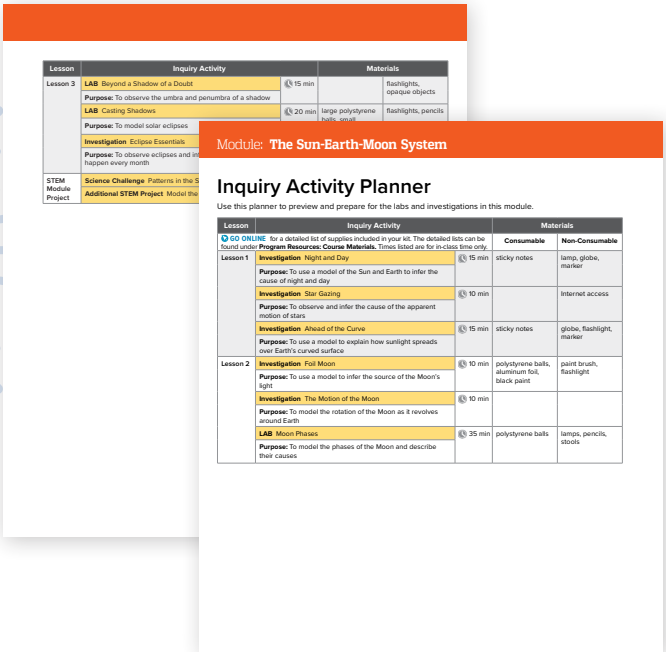
Empower Students with Hands-On, Inquiry-Based Learning

While working through Inquiry Activities in each lesson, students use the same techniques as scientists and engineers to ask questions, think critically, and design solutions to real-world problems. Easily implemented in any classroom, Inquiry Activities reinforce key science concepts through meaningful, engaging experiences.

Different types of Inquiry Activities in *Virginia Inspire Science* enable students to investigate phenomena and record findings the same way real-world practitioners do:

- Hands-on
- Engineering
- Investigations
- Simulations
- Data analysis





Inquiry Activity Planning

Planning and preparing for students to become elbows-deep in science is made easier with the *Virginia Inspire Science* Inquiry Activity Planner, which clearly identifies all the materials needed within the module.

Inquiry Spectrum

Not all inquiry activities are the same. Depending upon the available time and student readiness, structured inquiry might be perfect, or your class may be ready for open inquiry. The *Virginia Inspire Science* Inquiry Spectrum provides flexible options to adjust the inquiry level to align with the learning needs of each student.

Each lesson offers Inquiry Activities developed with a recommended inquiry spectrum level, giving you the flexibility to modify the level of instruction based on your students' needs.

Structured Inquiry
In this Inquiry Activity, students are given a question to investigate and procedure to follow.

Guided Inquiry
To make this a guided inquiry activity, have students plan their own investigation by selecting their own volumes and temperatures of water, making their predictions, and conducting their plan.

Open Inquiry
To make this an open inquiry activity, have students develop their own question about the link between amount of matter and its energy to investigate and design the investigation.



LAB Videos:

- Encourage student engagement.
- Show the activity materials and the step-by-step procedure.
- Demonstrate the expected outcomes for each step of the activity.
- Provide opportunities for students to pause the video and utilize the Claim, Evidence, and Reasoning skills they have learned through *Virginia Inspire Science*.
- Support easy implementation for new teachers, substitute teachers, absent students, or remote learning.



Support Every Learner

Virginia Inspire Science incorporates the research-based Universal Design For Learning Principles to ensure that all students have access to a rigorous curriculum. Support with practical strategies is found at the module and lesson level at multiple points. Leveled text aligns with the Lexile ranges appropriate for each grade level.

Differentiated Instruction

Robust differentiation support, including guiding questions for different student levels, as well as differentiation guidance, is found in the Teacher's Edition. Module and lesson level practice strategies are also found at multiple points.


Module: The Sun-Earth-Moon System

Inspire All Students

Use these strategies to scaffold your instruction and plan for successful teaching for all students.

Differentiated Instruction

Help students connect the key module concepts of the seasons, lunar phases, and eclipses of the Sun and Moon. Differentiate student learning as follows:

AL Approaching Level

Have students write definitions and make drawings for an illustrated dictionary that includes all the highlighted vocabulary terms in the module. Students can also include any additional terms they think are important to understanding the module content. Provide students with art materials such as paper and colored markers, as well as binders or staples for creating their books.

BL Beyond Level

Ask students to write and illustrate a travel brochure for visitors from another solar system highlighting the cyclic patterns of the Sun-Earth-Moon system. The brochure should include the seasons, lunar phases, and eclipses of the Sun and Moon. Encourage student to be create while keeping in mind the abbreviated format of a brochure.

English-Language Support

Home Language Support

Build on and make use of students' home language to support their science learning in English. Teach students how to identify and use cognates to create linguistic bridges between school science and home to capitalize on emerging bilingualism.

ENTERING and EMERGING

Cognate Strategies Demonstrate the meaning of cognates by writing the words *rotation* and *rotación* on the board. Ask students to tell you what the words mean using English or Spanish. Point out the differences and similarities in sounds and letters, for example, *rotation* ends in *-tion* and *rotación* ends in *-ción*, but the other letters that form each word are the same. Say and point to the word *rotation* and have students repeat. Then point to the word *rotación* and have students say the word. Note that the pronunciation is a little different but the spelling is not very different. There are many cognates in this module. Ask students

DEVELOPING and EXPANDING

Cognate Strategies Explain the meaning of cognates by writing the words *orbit* and *órbita* on the board. Ask students to tell you the meaning of the word, or explain the word if they don't know it. Have students in finding the differences and similarities in sounds and letters. For example, both words have the same spelling except for the addition of an *a* at the end of *órbita*. Say the word *orbit* and have students say *órbita*. Note that there is not a lot of difference in spelling or pronunciation. There are many cognates in this module. Encourage students to list the cognates, noting the differences in

BRIDGING and REACHING

Cognate Strategies Ask students to tell you if they know what a cognate is (i.e. a word that looks similar, sounds similar, and shares a meaning across some languages). Have students look for cognates in this module to find the cognate, system. Have them tell you the word in their home language (*sistema*) and give you a definition of the word in English. Throughout the module, students will find many cognates. When beginning a new page, ask students to scan the page for cognates and add them to a list along with their definitions in English.

EL Support

ENTERING and EMERGING Write the following sentences on chart paper: *Meteorological seasons are periods of time. Meteorological seasons are based on temperature. Astronomical seasons are periods of time. Astronomical seasons are based on the Sun.* Guide students to condense these sentences using *that*.

DEVELOPING and EXPANDING Support students in rereading the last paragraph to find two reasons meteorological seasons differ from astronomical seasons. **ASK** *them to condense the reasons into one sentence using which are*. Provide a sentence frame: _____, Meteorological seasons which are tied to our monthly _____, calendar are more consistent in length than _____ astronomical seasons.

BRIDGING and REACHING Have students explain how meteorological seasons differ from astronomical seasons by condensing their ideas. Meteorological seasons, which range from 90 days for winter and 92 days for spring and summer, are more consistent than astronomical calendars, which are based on the position of the Earth in relation to the Sun.

Supporting All Language Learners

Incorporating proven instructional practices for teaching english language learners (EL Support), *Virginia Inspire Science* embeds scaffolded activities into every module and lesson.

Supporting Reading Comprehension in Science

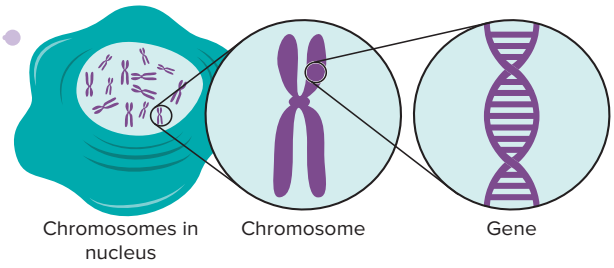
Virginia Inspire Science empowers all students to succeed in science—no matter their starting point. The Science Reading Essentials provide reading and writing support for students in need of a little extra help, including:

- Content written two Lexile levels lower than the on-level content.
- Teacher tips to provide ample student support.

Tips and questions throughout the margins of the lesson provide support for students at point of use.

Reading Essentials include visual supports to enhance learning for all types of students.

contains chromosomes from both parents. These exist as pairs, one chromosome from each parent.



TIP Note that the lines to the chromosome show that this is one of many chromosomes in the nucleus of a cell. The lines to the gene show that a gene is part of a chromosome.

Actively Learn Science

Actively Learn Science includes current event science articles, additional interactives, simulations, and videos that cover a wide range of core topics in 3–12 science, chemistry, biology, earth science, and physics.



Fuel Student Engagement

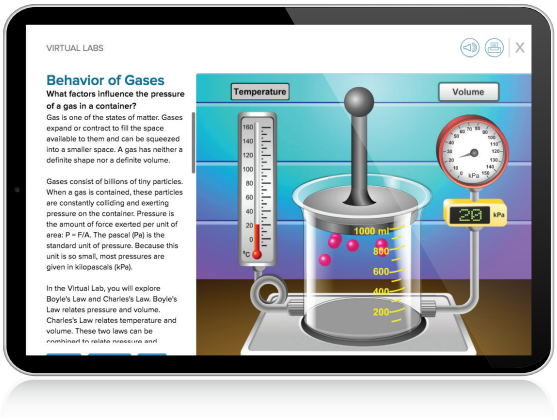
What happens when students are truly engaged?

The classroom has a buzzing undercurrent, students have an increased focus, and they are waiting to see what comes next. *Virginia Inspire Science* helps you fuel that engagement with features that keep students interested.

Simulations

Simulations offer a chance to experience real life scenarios that depict true events. These proven tools improve learning as well as create safe and engaging learning environments where failure is possible, something that is often missed when students are learning.



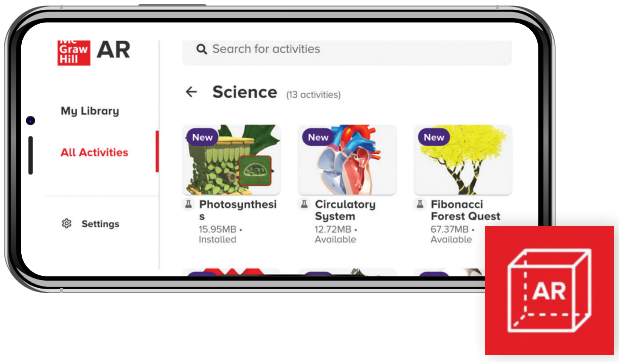


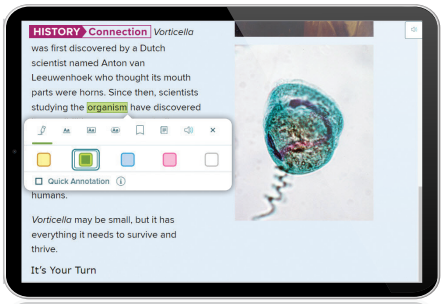
Virtual Labs

Virtual Labs provide an alternative engaging way for students to interact with an experiment that cannot always be done in a classroom setting. These interactive Virtual Labs are found throughout your *Virginia Inspire Science* program.

McGraw Hill AR App

This award-winning app brings learning to life through bite-sized, multisensory activities that promote deep, conceptual learning. The app leverages augmented reality to gamify challenging and abstract concepts, helping students learn through play.





Interactive Text

Engage students in online literacy learning with tools like text to speech, note-taking, and text highlighting. Interacting with learning creates a dynamic experience that's more engaging and will improve student learning and retention.



Videos

Enhance teaching and learning with videos that reinforce concepts and spark discussion. Videos encourage students to hone their analytical skills by analyzing media using the theories and concepts they are studying and to experience worlds beyond their own.



Kahoot!

Help students review important material in an engaging way with fun, game-show-like quizzes using Kahoot!



Assessment Strategies

Virginia Inspire Science includes a variety of assessment options to use before, during, and after each lesson and module, supporting teachers with differentiation strategies as students progress through their learning journey to mastery of the Virginia's Science SOLs.

Each ***Virginia Inspire Science*** lesson begins with a Formative Assessment Science Probe.



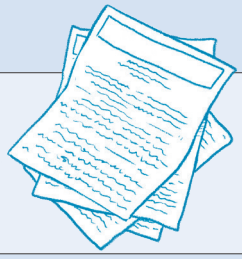
PAGE KEELEY, M.Ed.

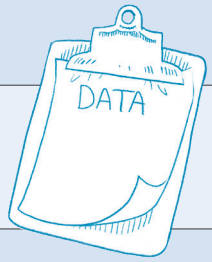
Page Keeley's Science Probes present the lesson phenomenon in an engaging way to promote student thinking and discussion, revealing commonly-held preconceptions students bring to their learning to guide differentiated instruction strategies.

Formative Assessment

Formative assessment—embedded at many points throughout each module and lesson—facilitates student reflection on their thinking (metacognition) and allows teachers to dynamically differentiate instruction. The table below shows the types of formative assessment resources in *Virginia Inspire Science* found online and in print.

FEATURE	INSTRUCTIONAL PURPOSE
Science Probes	Found at the beginning of each lesson, Science Probes reveal student preconceptions to guide instruction.
Claim-Evidence-Reasoning	With the CER Framework (Claim, Evidence, Reasoning), found in all lessons, students will make claims and document their reasoning during the Explore phase and add evidence and adjust their claims as needed later in the lesson.
Three-Dimensional Thinking Questions	Students will encounter questions that address at least two of the three dimensions.
LABS and INVESTIGATIONS	In each Lab or Investigation (2–3 per lesson), students may encounter analyzing and concluding questions that help build three-dimensional thinking skills.
SmartBook®	*SmartBook* transforms the way students read. A proven, adaptive learning program, it individualizes instruction to help students study more efficiently and retain more knowledge.



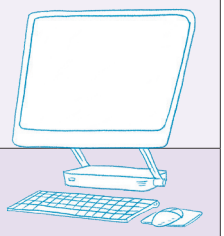


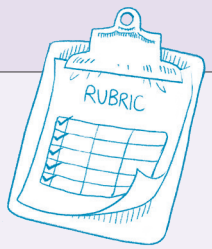
Summative Assessment

Ensure lasting learning and alignment of student skills to the Virginia's Science SOLs with the following summative assessment tools found in *Virginia Inspire Science* in print Student Editions and online.

FEATURE	INSTRUCTIONAL PURPOSE
Module Pretest	The Module Pretests, found at the beginning of each module, assess prerequisite knowledge of Virginia's Science SOLs from prior grades to evaluate student readiness for the module.
Three-Dimensional Thinking Questions	At the end of the lessons, students will demonstrate their understanding of at least two of the three dimensions to develop three-dimensional thinking skills.
Lesson Check	Found in every lesson online, Lesson Checks determine how students are progressing toward a mastery of the Virginia's Science SOLs.
Module Test	Found at the end of each module online, Module Tests evaluate student proficiency against the performance of the module with multiple choice, extended response, constructed response, and performance-task items.
STEM Module Project Performance-Based Rubrics	With each STEM Module Project, students will complete Performance-Based Rubrics and answer summative questions to demonstrate how they've applied their knowledge and understanding of the Virginia's Science SOLs to their project.
Vocabulary Check	Through online interactives, students practice and check their understanding of science language. Immediate feedback from the system is provided.



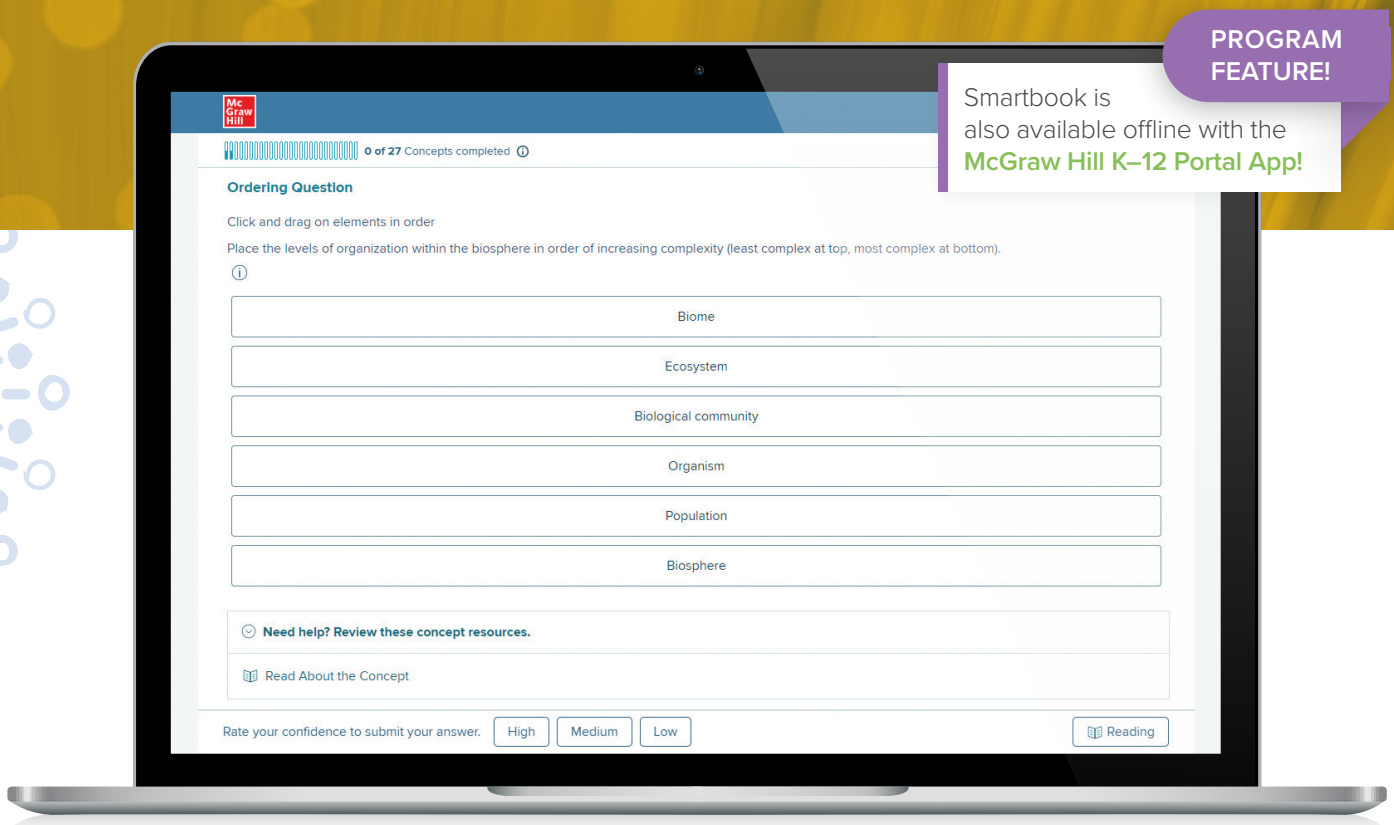




Adaptive Learning with *SmartBook*®

Each student enters the classroom with different strengths, interests, and abilities. Eliminate guesswork and get to the heart of their learning needs with adaptive, comprehensive differentiation.

The secret is ***SmartBook***, the first and only adaptive reading experience designed to change the way students read and learn. As the student progresses, *SmartBook* highlights the most impactful concepts the student needs to learn. When *SmartBook* detects what a student is most likely to forget, that content is presented for review to improve the student's knowledge retention.

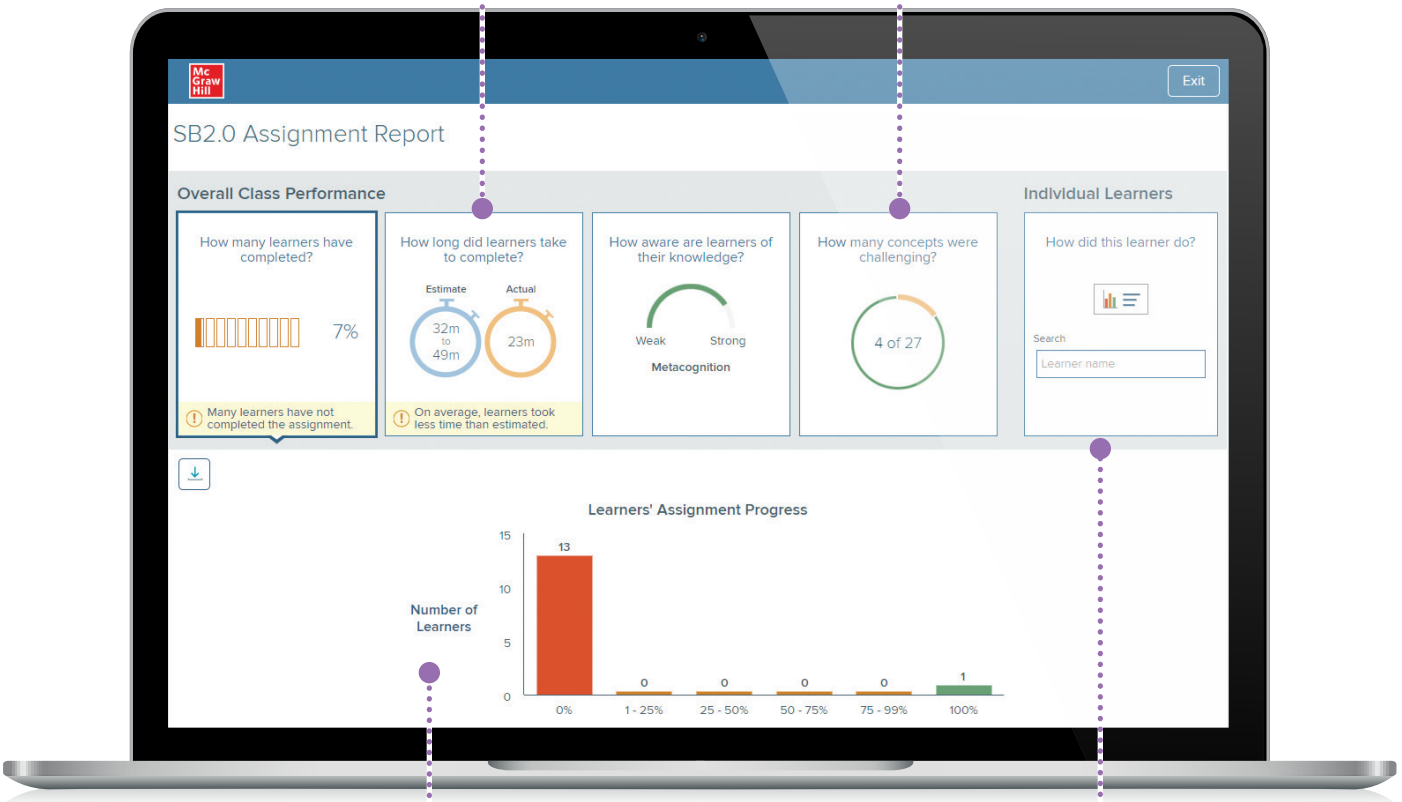


Real-Time Reporting Tools

Find efficiencies by managing and tracking individual student progress and the progress of the whole class. Teachers can focus on what students don't understand or still need to learn, rather than what they've already mastered.

See the duration students take to complete the assignment compared to the estimate.

Challenging concepts are revealed as students wrap up assignments, giving teachers the chance to reinforce topics before the next lesson.



Track progress on the assignment as students work through the questions.

Break down reporting to the individual student level.

Ongoing Professional Learning

Professional Development

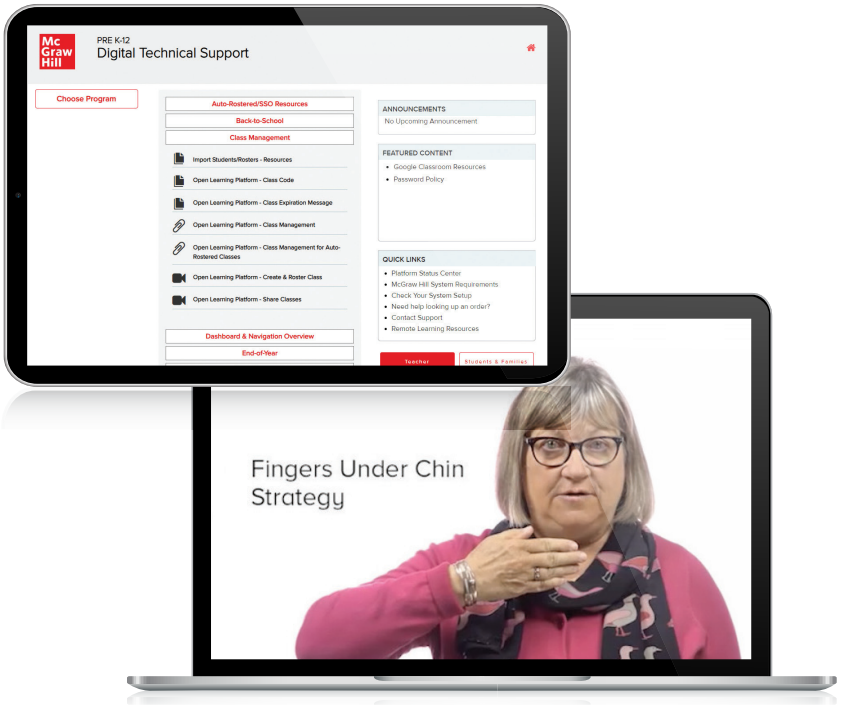
We know it can be a challenge to implement a new science program with new standards. That's why, in addition to live training options, *Virginia Inspire Science* comes with a library of relevant, self-paced, professional learning videos and modules to support you from implementation through instructional progression and mastery, all available 24/7, from any device.

Digital Platform Support

In the Technical Support Resource Library, you will find step-by-step instructions for each of your digital tools to help you feel confident planning, teaching, and assessing in the digital experience.

Ongoing Pedagogy Support

Access a wide range of resources on key instructional and pedagogical topics, including videos from program authors and consultants.



Seamless Integration Services

We are proud to work with schools to implement our programs into a range of classroom environments using different platforms. Both our Integration team and our Digital Technical Support team are ready to support you and your implementation.

Google Classroom

Clever

CANVAS BY INSTRUCTURE

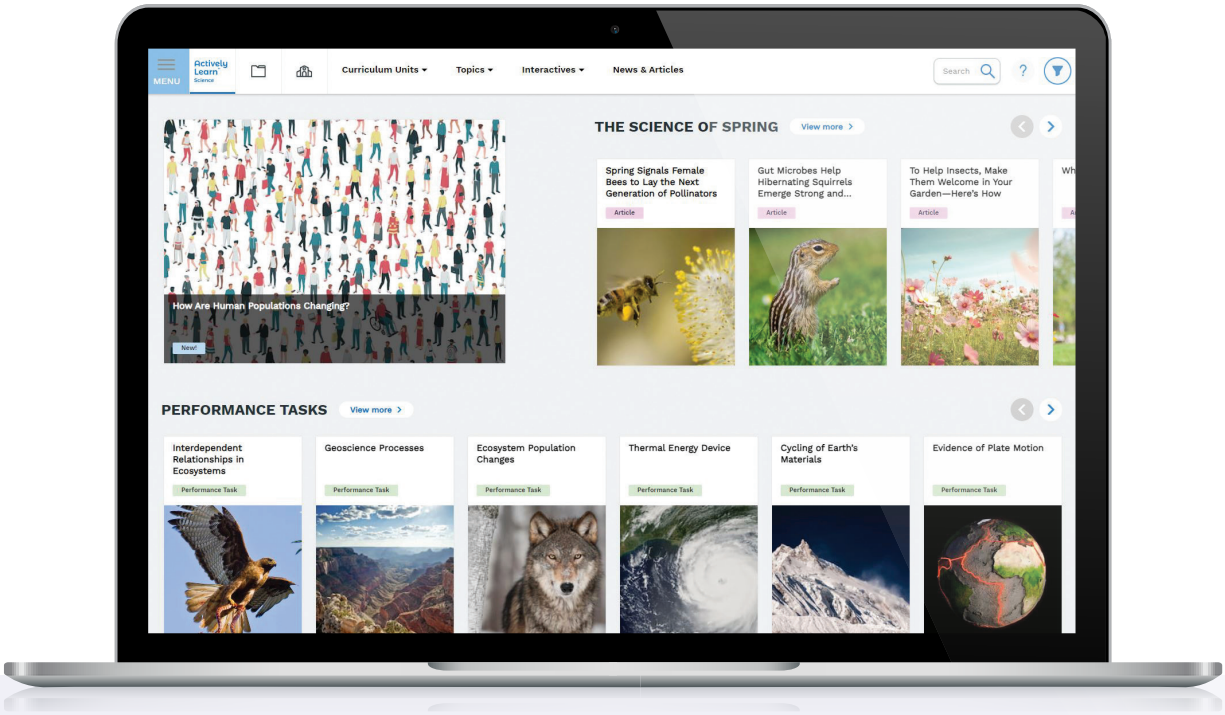
PowerSchool

schoology

Drive Deeper Science Learning with *Actively Learn*

As educators, we know how important it is to keep students engaged

That's why each *Virginia Inspire Science* module and lesson is designed to tap into students' natural curiosity about the world around them through the investigation of real-world phenomena. Student engagement is further fueled through an innovative digital experience, and connections to real-world applications with *Actively Learn*.



- **Engaging, relevant, standards-based content** for all learners
- **Science texts, articles, and videos** at each student's level
- **Inquiry-driven science simulations** that bring natural phenomena to life
- **TUVA Data Sets and PhET Simulations** include teacher instructional support
- **Interactive reading and study aids** that promote active collaboration
- **Rich, cross-curricular connections** to other subjects
- **Powerful tools** that let teachers customize content or upload their own
- **Access to student data** to inform instructional decisions

Virginia Inspire Science

HELP STUDENTS
EXPLORE THEIR WORLD



Learn more about
Virginia Inspire Science at
mheducation.com/virginia.

Mc Graw Hill

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